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PSYCHOLOGY.[1]

The Present State of Psychology.—At a meeting of the American Psychological Association, held at Princeton during the Christmas holidays just past, Dr. Patton, the eminent President of Princeton University, made an address of welcome to the assembled psychologists in course of which he reminded them that psychology was originally a branch of philosophy as distinguished from science, and urged them never to forget this fact and not to reduce psychology to the level of a mere science.

One, at least, of Dr. Patton's hearers, found his doctrine hard to accept. That psychology has been a part of philosophy all will admit, and, in whatever sense we take that much misused word, it is hard to believe that the time will ever come when the philosophical significance of the facts which it is the province of psychology to observe, and of the laws which she is bringing to light, will be ignored by the thoughtful. There is probably no psychologist so devoted to what Professor James wittily calls "the pendulum and chronoscope philosophy," or so sceptical as to the value of current philosophical theories, as to deny that psychology is to be an important part of the coming philosophy. But this is not, I think, what Dr. Patton had in mind.

For some generations "science" and "philosophy" have been regarded as distinct branches of human activity, and there has been little friendly commerce between their representatives. "Science" is that organized body of knowledge got by observation, experiment and demonstration. The spirit of pure curiosity to which we owe it, is a comparatively new momentum in man's intellectual life. Only in the last three centuries have its greatest discoveries been made. By "philosophy" we commonly understand those ancient disciplines in which the methods of the newer knowledge have been, as yet, but little used. Such are the sciences that deal with the facts of consciousness as such—the "sciences" of Logic, Psychology, Ethics and Metaphysics. These are commonly termed philosophical. Up to very recent times, these branches of learning have been but little affected by the scientific spirit. Their representatives have been, for the most part, men learned in the wisdom of the ancients, but ignorant of that of the moderns, and but little versed in the methods which have been found necessary to the successful prosecution of research. Many confine themselves to working over and over again all that the thinkers of the past have said, and are ambitious of nothing more. Others, having trained themselves with care in the methods which, after more than two thousand years' trial, have been found wanting, laboriously evolve volume after volume, the contents of which is destined to be forgotten before the printer's ink is dry. Their only instrument is introspection; what the observer sees in his own consciousness he ascribes to his fellow, and if his fellow, using a similar method, maintains the contrary, assuredly, thinks he, his fellow is either a liar or a fool.

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Psychology was one of the first of the mental sciences to feel the influence of the new spirit. Descartes and Leibniz, Hobbes, Locke, Hume and Hartley and many others, have faithfully endeavored to record the facts of mental life as they saw them, and to give a satisfactory explanation of them. Nor has their work proved fruitless, although its results are far from satisfactory. In the first place, all used introspection as their chief, or only, method. In the second place, the hypostatizing method of the old Greek psychology still persisted. Instead of recognizing that mental facts, like all facts, must be supposed to conform to laws the discovery of which is the chief end of science, we find a tendency to refer the facts observed to half personified "faculties." In the third place, the kindred science of physiology was, and indeed still is, in an imperfect condition, and it was not possible for the psychologist to bring his results into harmony with it. Until this is done, it is safe to say, the foundations of the science of psychology have not been firmly laid.

Within the last twenty years, psychology has entered upon a new era. Fechner, Weber and Wundt, and a host of followers, have undertaken a thorough examination into the simplest phenomena of mental life, especially into the relation of stimulus to sensation. This school uses, wherever possible, the method of direct experiment, and its ideal is to make psychology a science of determinate quantities. These are the psychophysicists in the narrower sense, and the psychophysical laboratory, with its elaborate apparatus for the regulation of stimulus-intensities and measurement of time-intervals, has come, within the last ten years, to be regarded as a necessary part of every great University. Yet it is openly claimed that the net result to the science of psychology of all this outlay is very small; that the analogy between physical and mental facts and laws has been pressed too far; that the results obtained are, for the most part, of physiological significance only; and, in some quarters the cry is heard, "Back to introspection." But we must remember that psychophysics is itself in the experimental stage, and, until methods of experiment in these new fields have been devised and perfected, we cannot expect definite results.

There has recently been developed, also within the limits of psychology proper, another discipline known as physiological psychology. It endeavors to determine the physiological conditions of consciousness, and, more particularly, the relation of the different qualities of consciousness to the several cortical areas. Much light has been thrown upon these problems, and, as one chief result, it is possible to introduce into introspection a precision before unknown. The English associationists have taught us, for example, on the basis of purely introspective evidence, that our ideas of physical things are complexes, containing visual, auditory, tactual and other elements—that what we call "knowledge" is a mass of dim, subconscious associations. Researches into the physiology of the brain have shown that color, sound and motion certainly, and probably touch, are related to different cortical areas—that lesions of portions of the cortex will destroy knowledge without impairing sensation. This at once supports the conclusions of introspection and enables us to form more accurate conceptions of the complex processes involved.

In England, the home *par excellence* of introspective psychology, Mr. Francis Galton, in his epoch-making book, "Inquiries into Human Faculty," has called attention to the mental idiosyncrasies of individuals. More recent workers in the same line have shown conclusively that introspection cannot give results that will be, in all cases, true. It is impossible to overestimate the importance of this discovery, and there is nothing more surprising than that a fact at once so important and so easily ascertained, should have escaped notice for more than two thousand years. Since the early days of Greek philosophy, for example, the Nominalists and the Conceptualists have waged unending warfare; the Conceptualists maintain that the name of a class awakens an idea or mental state that is not representative of any member of that class; the Nominalists, on the contrary, hold that the class name either awakens a concrete image of a particular member of the class, or else it awakens no mental state whatever—it is a mere *flatus vocis.* And now we know that both are right. Each was describing what introspection revealed to him, and abusing his fellow-student for doing likewise.

Mr. Galton's discovery of the idiosyncrasies of the individual has not only showed the limitations within which alone introspection can be used, but has served to call attention to other forms of comparative psychology. Researches into the mental life of children, of the lower animals, of the congenitally blind and deaf, of criminals and the insane, have been eagerly prosecuted. It is not easy to estimate the value of this work to psychology proper. It is difficult to get accurate information as to the mental life of even an intelligent and educated man. When I question him, I can have no security that my question is understood, nor can I know that he attaches to the words of his reply exactly the meaning that I do. In inquiring into forms of consciousness still more widely removed from my own, I encounter greater difficulties. Not only does the danger of misunderstanding language increase, but, in most cases, it is impossible to use language at all, and we are compelled to rely upon analogies based upon movements and expression for our knowledge as to what passes in these lower forms of consciousness. It is not, I think, likely that the science of psychology proper will be much the gainer by this work, except in the case of some special problems. But, on the other hand, it is likely that as our knowledge of human psychology increases, we shall find ourselves more and more able to interpret these divergent forms of consciousness.

There is yet another line of psychological inquiry that has been opened within the last twenty years. This is the study of hypnosis and allied "automatic" states. It has been prosecuted, for the most part, in France, and, as the work has been done rather by physicians than by psychologists, the value of the inquiry to the pure science is, as yet, undetermined. Several attempts have been made, however, to bring these facts to bear upon the general theory of psychology. The most comprehensive and, in my opinion, the most important, is that made by Pierre Janet in his work on "Mental Automatism" ("L'Automatisme Psychologique") published in Paris about five years ago.

Yet another "*Richtung*" is that commonly known as "Psychical Research." Its object is the investigation of phenomena supposed to be "supernatural" or "supernormal." Although not necessarily psychological, it so happens that the great majority of such phenomena have been found to be explicable by simple psychological laws, and it seems, therefore, proper to include it in an enumeration of the chief forms of contemporary psychology. Moreover, many of the phenomena which have not, as yet, been explained by known laws, such as those of telepathy and clairvoyance, would seem to require the assumption of new distinctively psychological principles.

The conception of evolution in psychology, as in all other branches of science, exerts a controlling influence. It is clearly recognized that man's mind, like his body, is what it is by virtue of the environment in which it exists. The law of preservation has determined the development of the special senses, the emotions, the impulses, and even of the aspects of consciousness which we are accustomed to regard as distinctively human—discursive thought, reasoning and volition. In some cases it is possible to classify mental phenomena teleologically where other bases of classification prove inapplicable, and phenomena formerly unintelligible sometimes become intelligible from this point of view. Yet it must be admitted that genetic psychology is yet to be. The history of some forms of consciousness, it is true, has been fairly well ascertained. We may be said, I think, to know something of the origin of the emotions, of the "recept" and concept, of many impulses and, perhaps, of the simpler types of volition. But no systematic and comprehensive genetic theory has yet been propounded that has met with any considerable acceptance.

It is too late, then, for those who are addicted to philosophy, as distinguished from science, to lament the introduction of scientific methods into psychology. Little by little those methods of exact and painstaking research will make their way into every department of human thought. We are apt to talk much of Logic, Psychology, Ethics and Metaphysics as being the mental "sciences." We forget that, as sciences, they do not yet exist. They exist only as rather ill-coordinated tendencies. Each has a subject matter which is sufficiently well-defined for practical purposes, and each has a few well-worn generalizations that meet with some acceptance. But the very facts with which they deal are still, in large measure, subjects of dispute; the conceptions under which it is proposed to systematize those facts are rough hewn from the vulgar common sense of the community; ill-defined and crude, much labor must be expended upon them before we can hope to make our facts intelligible. This is the work to which the student of mental phenomena must address himself. If we draw a distinction between science and philosophy, even though we cannot, as yet, claim for psychology the proud name of a science, let it be once for all understood that she is to be regarded as a scientific rather than a philosophical discipline.

But why should any such distinction be drawn? The word "philosophy" is, as I have said, frequently applied to those branches of learning which we have inherited from the ancients, which still preserve, on the whole, their ancient form. And the usage is not without justification. For the "philosopher" was originally a man who pursued knowledge for its own sake, and the knowledge which he acquired constituted his philosophy. But this is what we mean to-day by "science." Mathematics, physics, astronomy and psychology were all alike parts of the Greek "philosophy," and it is not surprising that we have retained the old name for the older science while we have coined a new word for the newer. In course of time, however, all branches of human knowledge will certainly be brought within the domain of science, and the older word will be free for a new sense. Now there remains a science, as yet undeveloped, for whose designation this term should be reserved. When the other sciences have been brought to higher perfection, and we have obtained a more exact conception of the cosmos, we shall desire to understand that cosmos in its relations to the human being as such. This science, to which all other sciences will contribute, which will formulate the laws under which the human consciousness stands in its relation to the totality of existence and deduce therefrom the principles by which the life of the individual is to be guided, may justly be termed by that ancient and revered name, Philosophy,—The Science.—W. ROMAINE NEWBOLD.